

BOEKBESPREKING : BOOK REVIEW

PHYSICAL CHEMISTRY AND BIOLOGY

A Biologist's Physical Chemistry. By J. G. Morris, B.Sc., D.Phil. Pp. xiv + 367. £4.0.0. Maidenhead, Berks.: Edward Arnold, 1968.

This recent work belongs to a series of student texts in the field of contemporary biology edited by Professor Barrington and Dr. Willis. The names of these general editors together with that of the author must surely indicate the high standard of the work under review. As indeed, does the foreword by Prof. H. L. Kormberg. I received this text to review at a time of reworking my undergraduate physiology lectures, and I was pleased to see that both Dr. Morris and myself have taken the same approach, namely that it is essential to bring about a simple mathematical revision and follow this with information about units and dimensions and the handling of these units in calculations. This is followed by an excellent chapter on the behaviour of gases and the use of manometers.

From this chapter there is a natural evolution to the properties of aqueous solutions, leading finally to osmosis and the electrolyte properties of solutions. The pity of it is that in our crammed teaching programmes in South African universities

we are not able, in the biological sciences, to make use of all the information which Dr. Morris provides in his text. If we had a longer tradition of independent reading by undergraduate students we would expect effective utilization of this work. Nevertheless, I believe it to be an essential work in the senior undergraduate and honours years in the biological sciences, particularly as a normal requirement for a major in a biological degree is at least Chemistry I. The book at no time goes beyond the requirements of this level, and much of the mathematical symbolization which frightens undergraduate students of biology has been removed from the text, which requires merely a simple understanding of algebra and indices.

The book is amply illustrated by graphs which are clearly produced and carefully placed in relation to the text. At the end of each chapter, the author has compiled a number of questions which should be extremely useful to undergraduate courses in biochemistry. Answers are given at the end of the book.

This is a carefully constructed work, written by an authority with considerable university teaching experience.

B.R.A.